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(54) Method for manufacturing laminated wood tiles with surface machining, and tile manufactured with said method

(57) A method for manufacturing laminated-wood tiles with surface machining comprising the steps of: forming, on both faces (11,12) of a tile (10), surface machinings by chip-forming so as to produce symmetry with respect to a plane which is parallel to the faces (11,12) and passes through a centerline. Directly after the chip-forming machining, the faces (11,12) are subjected to a surface treatment with a varnish suitable to seal the pores of the wood. The resulting tile (10) thus has both faces (11,12) machined by chip-forming with symmetrical machinings.

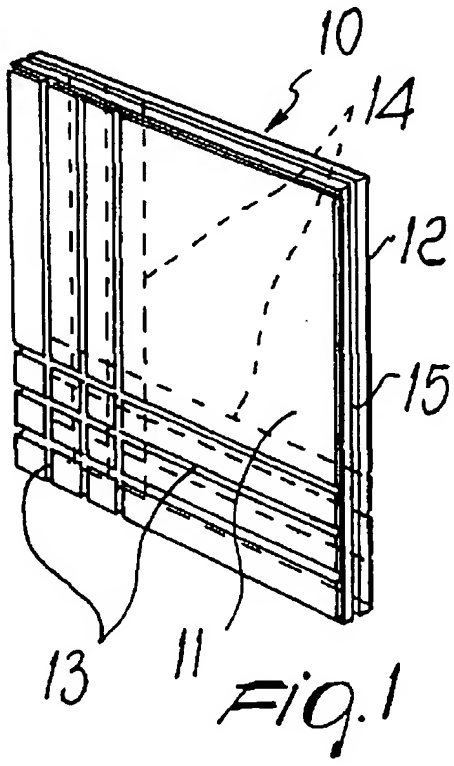

Fig.1

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Description

The present invention relates to a method for manufacturing laminated-wood tiles with surface machining and to the tiles formed with said method.

Commercially available laminated-wood elements are used mainly in the field of furniture.

Laminated wood, obtained by arranging side by side, interlocking and mutually gluing strips cut from heartwood, is used mainly to form surfaces of tables and of pieces of furniture such as for example modular kitchens.

The alternation of strips with mutually different color shades produces valuable aesthetic effects; accordingly, in recent years the market linked to these products has expanded quickly.

From the structural point of view, the laminated-wood product is qualitatively better than normal heartwood, since the cutting into strips and the subsequent reassembly so as to form the laminated semifinished item, from which the finished product is then obtained, in practice eliminate the tensions inside the material caused by the mutual interaction of the fibers that constitute it.

Accordingly, laminated-wood surfaces are certainly preferable to normal heartwood surfaces, since they are not subject, in the course of time, to deformations caused by the above-mentioned tensions.

The commercial success of laminated-wood products has stimulated manufacturers to constantly expand their range of products, seeking alternatives to the above-mentioned "horizontal" applications, in which the essential requirement was to provide perfectly flat and leveled surfaces, and thus by studying "vertical" applications, such as dividing walls, claddings for walls, door- and windows-frames, etcetera.

In any case in these products there is very often the need to provide surface decorations in order to further improve the aesthetic effect. The attempts made so far have not yielded satisfactory results, since surface chip-forming machining produces the undesirable effect of altering the balance of tensions inside the component, with consequent deformations and unacceptable aesthetic consequences.

This is also particularly aggravated if the structure is formed by composing a plurality of tiles mutually joined at their edges.

The aim of the present invention is to provide a method for manufacturing laminated-wood tiles having a surface machining which solves the above drawbacks of the prior art, particularly to provide tiles which are not subject to deformation in the course of time.

Within the scope of this aim, a consequent primary object of the present invention is to provide laminated-wood tiles for which the production of dividing walls or similar vertical structures is feasible.

Another important object of the invention is to provide a tile which can be easily composed with other tiles so as to form the dividing structures.

Another object of the invention is to provid a method which can be performed with conventional equipment.

This aim, these objects and others which will become apparent hereinafter are achieved by a method for manufacturing laminated-wood tiles with surface machining comprising the steps of:

– forming, on both faces of a tile, surface machinings by chip-forming so as to produce symmetry with respect to a plane which is parallel to the faces and passes through a centerline; and
– directly after said machinings, treating the surface of the tile with a varnish suitable to close the pores of the wood.

Advantageously, the laminated-wood tile has both its faces that are machined by chip-forming with machinings which are symmetrical with respect to a plane which is parallel to the faces and passes through the centerline.

Further characteristics and advantages of the present invention will become apparent from the following detailed description of the operating steps of the method and of the tile formed with said method, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of a first tile;
Figure 2 is a side view of the tile of Figure 1;
Figure 3 is a perspective view of a second tile with an interlocking strip;
Figure 4 is a perspective view of a portion of a panel formed with tiles according to the invention.

With reference to the above figures, a method for forming laminated-wood tiles with surface machining includes a first step, during which surface chip-forming machinings (for example millings) are performed, for example with numeric-control pantograph machines, so as to obtain a symmetry with respect to a plane which is parallel to the faces and passes through the centerline.

With reference in particular to figures 1 and 2, a tile machined in this manner is designated by the reference numeral 10 and has, on both faces 11 and 12, channels, designated by the reference numerals 13 and 14 respectively, obtained by chip-forming machining so as to form mirror-symmetrical patterns.

This, in particular, has the effect of balancing the tensions produced in the material by the individual machinings.

In a subsequent step of the method, directly after the chip-forming machinings the surface of the tile is treated with a wood varnish suitable to seal its pores.

This achieves a complete separation of the material from the atmosphere and from the negative effects that contact therewith can cause.

Another example of tile, again designated by the same reference numerals, is shown in Figure 3 and is characterized by decorative patterns which are different from the preceding tile but are in any case produced with the same method.

The tile 10 has a milling 15 which is formed perimetrically along the entire rim and forms the groove of a tongue-and-groove coupling, wherein the tongue is constituted by a strip 16 made of wood, plastics or metal.

The strip 16, whose length is substantially equal to one side of the tile 10, can be inserted in the milling 15 and can thus be interposed so as to be concealed from view between two consecutive tiles 10.

The width of the strip 16 is at the most equal to the sum of the depth of two millings and the thickness is such that insertion occurs substantially without play.

The composition of multiple tiles 10 with the strips 16 is suitable to form panels which, supported by perimetric frames 17, inside which they are composed, form vertical structures such as dividing walls, wall claddings, etcetera.

In alternative embodiments, instead of the strip 16 it is possible to provide a profile with a cross-shaped section, not shown in the figures, which can be inserted so that two co-planar wings are between the tiles, and the other two wings, which are perpendicular to the preceding ones, are externally visible.

In practice it has been observed that the intended aim and objects of the present invention have been achieved.

The provision of the method according to the present invention in fact extends the production possibilities related to laminated wood to the field of vertical structures with surface machining.

The method can be performed with conventional numeric-control chip-forming machines and with conventional varnishing machines.

The invention thus conceived is susceptible of numerous modifications and variations, all of which are within the scope of the inventive concept.

All the details may also be replaced with other technically equivalent elements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the interpretation of each element identified by way of example by such reference signs.

Claims

1. A method for manufacturing laminated-wood tiles with surface machining, comprising the steps of:

   -- forming, on both faces of a tile, surface machinings by chip-forming so as to produce symmetry with respect to a plane which is parallel to the faces that pass through a centerline; and

   -- directly after said machinings, treating the surface of the tile with a varnish suitable to seal the pores of the wood.

2. A laminated-wood tile produced with the method according to claim 1, characterized in that both of its faces are machined by chip-forming with machinings which are symmetrical with respect to a plane which is parallel to said faces and passes through the centerline.

3. A tile according to claim 2, characterized in that a longitudinal milling is defined on at least part of the perimetric rim, said milling constituting a groove of a tongue-and-groove interlock coupling.

4. A tile according to claim 3, characterized in that the tongue of said tongue-and-groove interlock coupling is a strip which can be inserted in said milling and can be interposed between two consecutive tiles or between a tile and a corresponding portion of a supporting frame provided with an insertion groove.

5. A tile according to claim 3, characterized in that the tongue of said tongue-and-groove interlock coupling is constituted by a profile having a cross-shaped section.

6. A panel, characterized in that it is constituted by a plurality of laminated-wood tiles according to claim 2.

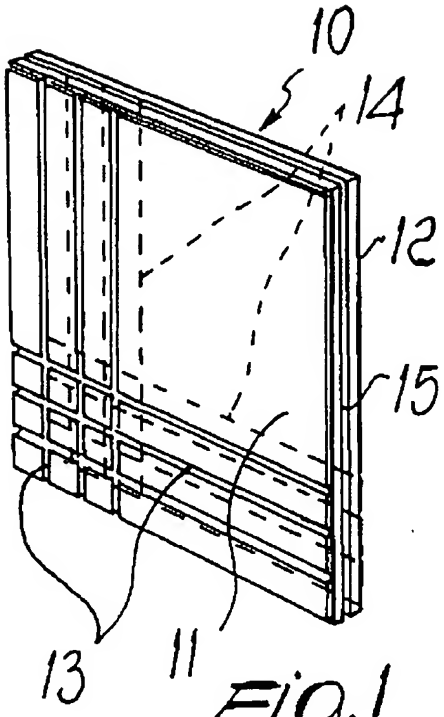

Fig.1

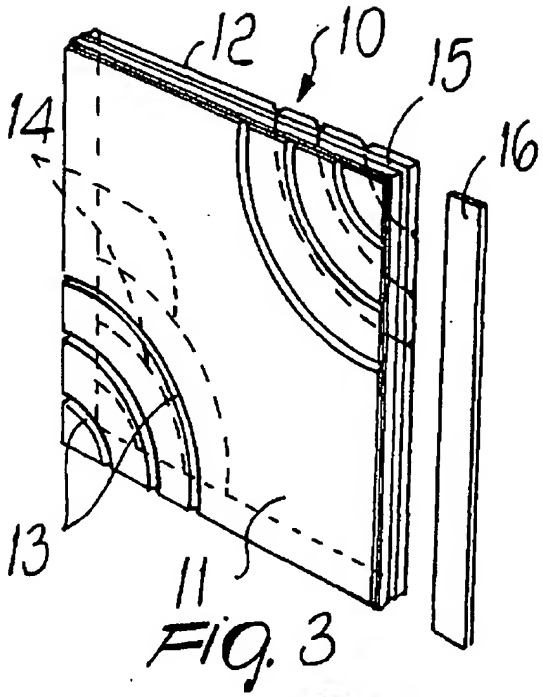

Fig.3

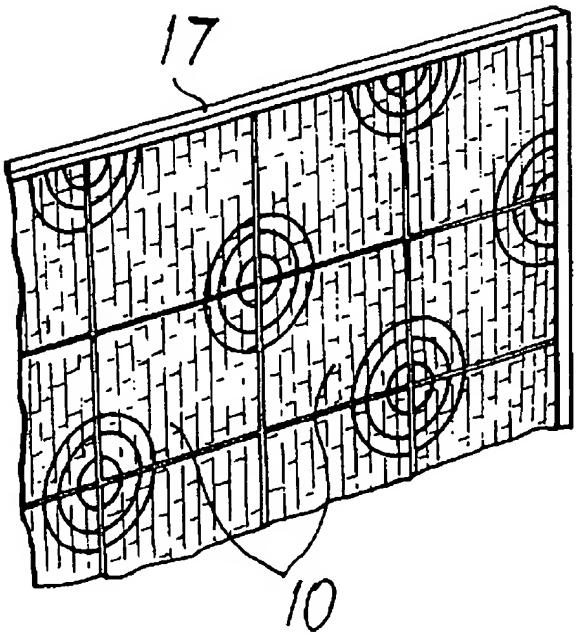

Fig.4

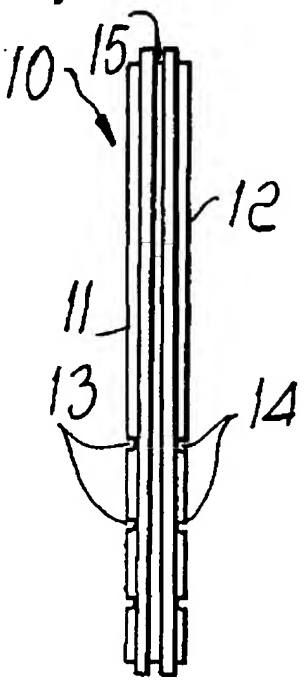

Fig.2